

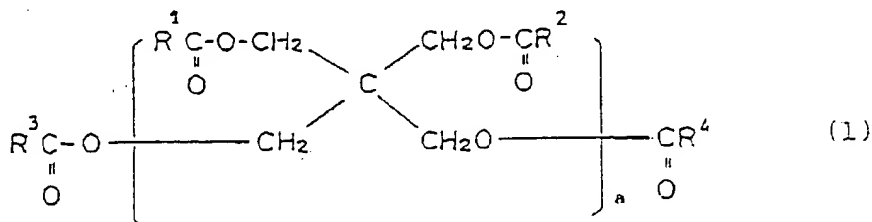
cycloalkyl groups having 6-12 carbon atoms and a is an integer of 1 to 3; and

0.1-5% by weight based on the total amount of said refrigerator oil of at least one epoxy compound selected from the group consisting of phenylglycidyl ether epoxy compounds, alkylphenylglycidyl ether epoxy compounds, ~~alkylglycidyl ether epoxy compounds~~, glycidyl ester epoxy compounds, ~~aryloxirane compounds~~, ~~alkyloxirane compounds~~, ~~alicyclic epoxy compounds~~ and epoxidized fatty acid monoesters.

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Claim 2. (currently amended) A fluid composition for use in refrigerators, which consists of a chlorine-free fluorocarbon refrigerant and a refrigerator oil, and said refrigerator oil consists of as a base oil:

a pentaerythritol ester of formula (1)



wherein $R^1 - R^4$ are identical with or different from each other and are each a member selected from the group consisting of straight-chain alkyl groups having 3 to 11 carbon atoms, branched-chain alkyl groups having 3 to 15 carbon atoms and cycloalkyl groups having 6-12 carbon atoms and a is an integer of 1 to 3;

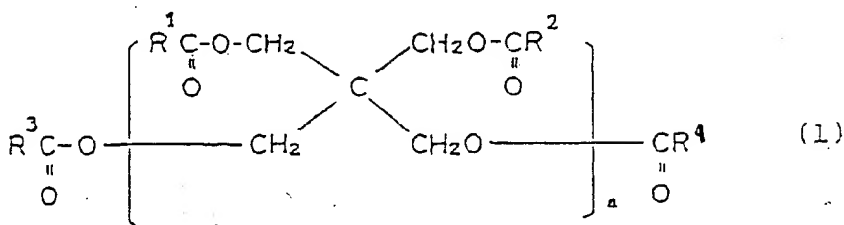
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Cont'd at least one conventional oil selected from the group consisting of paraffinic mineral oils, naphthenic mineral oils, poly α -olefins and alkylbenzenes; and

0.1-5% by weight based on the total amount of said refrigerator oil of at least one epoxy compound selected from the group consisting of phenylglycidyl ether epoxy compounds, alkylphenylglycidyl ether epoxy compounds, ~~alkylglycidyl ether epoxy compounds~~, glycidyl ester epoxy compounds, ~~aryloxirane compounds~~, ~~alkyloxirane compounds~~, ~~alicyclic epoxy compounds~~ and epoxidized fatty acid monoesters.

Claim 3. (currently amended) A fluid composition for use in refrigerators, which consists of a chlorine-free fluorocarbon

refrigerant and a refrigerator oil, and said refrigerator oil consists of as a base oil:

a pentaerythritol ester of formula (1)



wherein R¹ - R⁴ are identical with or different from each other and are each a member selected from the group consisting of straight-chain alkyl groups having 3 to 11 carbon atoms, branched-chain alkyl groups having 3 to 15 carbon atoms and cycloalkyl groups having 6-12 carbon atoms and a is an integer of 1 to 3;

0.1-5% by weight based on the total amount, of said refrigerator oil of at least one epoxy compound selected from the group consisting of phenylglycidyl ether epoxy compounds, alkylphenylglycidyl ether epoxy compounds, ~~alkylglycidyl ether epoxy compounds~~, glycidyl ester epoxy compounds, ~~aryloxirane~~

Claim 4. (currently amended) A fluid composition for use in refrigerators, which consists of a chlorine-free fluorocarbon refrigerant and a refrigerator oil, and said refrigerator oil consists of as a base oil:

$$\text{R}^3\overset{\text{O}}{\underset{\parallel}{\text{C}}}-\left[\begin{array}{c} \text{R}\overset{1}{\overset{\text{O}}{\underset{\parallel}{\text{C}}}}-\text{O}-\text{CH}_2 \\ | \\ \text{CH}_2 \end{array} \right]_n - \left[\begin{array}{c} \text{CH}_2-\text{O}-\overset{2}{\overset{\text{O}}{\underset{\parallel}{\text{C}}}}-\text{R} \\ | \\ \text{CH}_2-\text{O}-\overset{\text{O}}{\underset{\parallel}{\text{C}}}-\text{R}^4 \end{array} \right]_m \quad (1)$$

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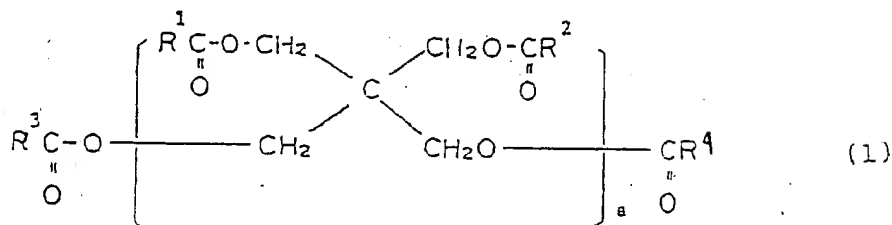
branched-chain alkyl groups having 3 to 15 carbon atoms and cycloalkyl groups having 6-12 carbon atoms and a is an integer of 1 to 3;

0.1-5% by weight based on the total amount of said refrigerator oil of at least one epoxy compound selected from the group consisting of phenylglycidyl ether epoxy compounds, alkylphenylglycidyl ether epoxy compounds, ~~alkylglycidyl ether epoxy compounds~~, glycidyl ester epoxy compounds, ~~aryloxirane compounds~~, ~~alkyloxirane compounds~~, ~~alicyclic epoxy compounds~~ and epoxidized fatty acid monoesters; and

at least one phosphorus compound selected from the group consisting of phosphoric esters, acid phosphoric esters, amine salts of acid phosphoric esters, chlorinated phosphoric esters, and phosphorous esters.

Claim 5. (currently amended) A fluid composition for use in refrigerators, which consists of a chlorine-free fluorocarbon refrigerant and a refrigerator oil, and said refrigerator oil consists of as a base oil:

a pentaerythritol ester of formula (1)



wherein R¹-R⁴ are identical with or different from each other and are each a member selected from the group consisting of straight-chain alkyl groups having 3 to 11 carbon atoms, branched-chain alkyl groups having 3 to 15 carbon atoms and cycloalkyl groups having 6-12 carbon atoms and a is an integer of 1 to 3;

at least one conventional oil selected from the group consisting of paraffinic mineral oils, naphthenic mineral oils, poly α -olefins and alkylbenzenes;

0.1-5% by weight based on the total amount of said refrigerator oil of at least one epoxy compound selected from the group consisting of phenylglycidyl ether epoxy compounds, alkylphenylglycidyl ether epoxy compounds, ~~alkylglycidyl ether epoxy compounds,~~ glycidyl ester epoxy compounds, ~~aryloxirane~~

Claim 6. (currently amended) A fluid composition for use in refrigerators, which consists of a chlorine-free fluorocarbon refrigerant and a refrigerator oil, and said refrigerator oil consists of as a base oil:

$$\text{R}^3\text{C}(=\text{O})\text{O}-\left[\text{CH}_2-\text{C}\left(\begin{array}{l} \text{CH}_2\text{O}-\text{CR}^2(=\text{O}) \\ \text{CH}_2\text{O}-\text{CR}^1(=\text{O}) \end{array}\right)-\text{CH}_2\right]_a-\text{CR}^4(=\text{O}) \quad (1)$$

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branched-chain alkyl groups having 3 to 15 carbon atoms and cycloalkyl groups having 6-12 carbon atoms and a is an integer of 1 to 3;

at least one conventional oil selected from the group consisting of paraffinic mineral oils, naphthenic mineral oils, poly α -olefins and alkylbenzenes;

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0.1-5% by weight based on the total amount of said refrigerator oil of at least one epoxy compound selected from the group consisting of phenylglycidyl ether epoxy compounds, alkylphenylglycidyl ether epoxy compounds, ~~alkylglycidyl ether epoxy compounds~~, glycidyl ester epoxy compounds, ~~aryloxirane compounds~~, ~~alkyloxirane compounds~~, ~~alicyclic epoxy compounds~~ and epoxidized fatty acid monoesters; and

at least one phosphorus compound selected from the group consisting of phosphoric esters, acid phosphoric esters, amine salts of acid phosphoric esters, chlorinated phosphoric esters, and phosphorous esters.

$$R^3 \overset{\text{O}}{\parallel} C - O - \left[\begin{array}{c} R^1 \overset{\text{O}}{\parallel} C - O - CH_2 \\ | \\ CH_2 \end{array} \right]_n \begin{array}{c} CH_2 \\ | \\ CH_2 O - CR^2 \\ | \\ O \end{array} - CR^4 \quad (1)$$

0.1-5% by weight based on the total amount of said refrigerator oil of at least one epoxy compound selected from the group consisting of phenylglycidyl ether epoxy compounds, alkylphenylglycidyl ether epoxy compounds, ~~alkylglycidyl ether~~

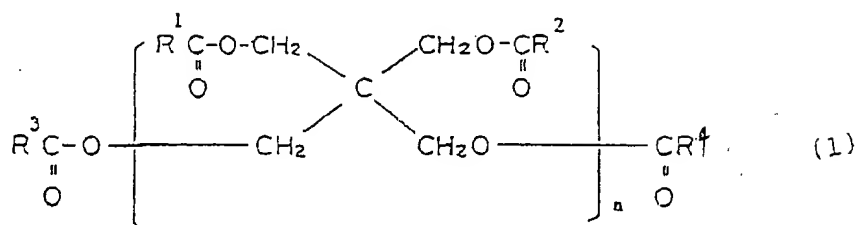
~~epoxy compounds, glycidyl ester epoxy compounds, aryloxirane compounds, alkyloxirane compounds, alicyclic epoxy compounds and epoxidized fatty acid monoesters;~~

at least one phosphorus compound selected from the group consisting of phosphoric esters, acid phosphoric esters, amine salts of acid phosphoric esters, chlorinated phosphoric esters, and phosphorous esters; and

at least one ^{additive}~~additive~~ selected from the group consisting of phenol antioxidants, amine antioxidants, wear resistant additives, extreme pressure agents, oiliness improvers, anti-foaming agents and metal inactivators.

Claim 8. (currently amended) A fluid composition for use in refrigerators, which consists of a chlorine-free fluorocarbon refrigerant and a refrigerator oil, and said refrigerator oil consists of as a base oil:

a pentaerythritol ester of formula (1)



wherein R¹-R⁴ are identical with or different from each other and are each a member selected from the group consisting of straight-chain alkyl groups having 3 to 11 carbon atoms, branched-chain alkyl groups having 3 to 15 carbon atoms and cycloalkyl groups having 6-12 carbon atoms and a is an integer of 1 to 3;

at least one conventional oil selected from the group consisting of paraffinic mineral oils, naphthenic mineral oils, poly α -olefins and alkylbenzenes;

0.1-5% by weight based on the total amount of said refrigerator oil of at least one epoxy compound selected from the group consisting of phenylglycidyl ether epoxy compounds, alkylphenylglycidyl ether epoxy compounds, ~~alkylglycidyl ether epoxy compounds~~, glycidyl ester epoxy compounds, aryloxirane

~~compounds, alkyloxirane compounds, alicyclic epoxy compounds and~~
epoxidized fatty acid monoesters;

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at least one phosphorus compound selected from the group
consisting of phosphoric esters, acid phosphoric esters, amine
salts of acid phosphoric esters, chlorinated phosphoric esters,
and phosphorous esters; and

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at least one ^{additive}~~additive~~ selected from the group consisting of
phenol antioxidants, amine antioxidants, wear resistant
additives, extreme pressure agents, oiliness improvers, anti-
foaming agents and metal inactivators.
